

## Product datasheet

### Anti-SDHB antibody [EPR10880] $\alpha$ ab175225

**KO VALIDATED** Recombinant RabMAb<sup>®</sup>

[5 References](#) [15 Images](#)

#### Overview

<b>Product name</b>	Anti-SDHB antibody [EPR10880]
<b>Description</b>	Rabbit monoclonal [EPR10880] to SDHB
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), WB, IP, IHC-P <b>Unsuitable for:</b> ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide within Human SDHB aa 1 to the C-terminus. The exact sequence is proprietary. Database link: <a href="#">P21912</a>
<b>Positive control</b>	WB: HepG2, A431 and Jurkat whole cell lysate ( <a href="#">ab7899</a> ) and human fetal heart, mouse brain and rat brain tissue lysates. IHC-P: Human caratoid paraganglioma, human mesenchymoma, human kidney, human liver, mouse kidney and rat kidney tissues. Flow Cyt (intra): Jurkat and A431 cells.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> .  Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR10880

Isotype

IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab175225 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/10 - 1/200. <b>ab172730</b> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/50000 - 1/200000. Predicted molecular weight: 32 kDa.
IP		1/10 - 1/100.
IHC-P		1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See <b>IHC antigen retrieval protocols</b> . <b>For unpurified use at 1/100 - 1/250.</b>

**Application notes** Is unsuitable for ICC/IF.

## Target

**Function** Iron-sulfur protein (IP) subunit of succinate dehydrogenase (SDH) that is involved in complex II of the mitochondrial electron transport chain and is responsible for transferring electrons from succinate to ubiquinone (coenzyme Q).

**Pathway** Carbohydrate metabolism; tricarboxylic acid cycle; fumarate from succinate (eukaryal route): step 1/1.

**Involvement in disease** Defects in SDHB are a cause of susceptibility to pheochromocytoma (PCC) [MIM:171300]. A catecholamine-producing tumor of chromaffin tissue of the adrenal medulla or sympathetic paraganglia. The cardinal symptom, reflecting the increased secretion of epinephrine and norepinephrine, is hypertension, which may be persistent or intermittent. Defects in SDHB are the cause of hereditary paragangliomas type 4 (PGL4) [MIM:115310]; also known as familial non-chromaffin paragangliomas type 4. Paragangliomas refer to rare and mostly benign tumors that arise from any component of the neuroendocrine system. PGL4 is characterized by the development of mostly benign, highly vascular, slow growing tumors in the head and neck. In the head and neck region, the carotid body is the largest of all paraganglia and is also the most common site of the tumors. Defects in SDHB are a cause of paraganglioma and gastric stromal sarcoma (PGGSS) [MIM:606864]; also called Carney-Stratakis syndrome. Gastrointestinal stromal tumors may be sporadic or inherited in an autosomal dominant manner, alone or as a component of a syndrome associated with other tumors, such as in the context of neurofibromatosis type 1 (NF1). Patients have both gastrointestinal stromal tumors and paragangliomas. Susceptibility to the tumors was inherited in an apparently autosomal dominant manner, with incomplete penetrance. Defects in SDHB are a cause of Cowden-like syndrome (CWDLS) [MIM:612359]. Cowden-like syndrome is a cancer predisposition syndrome associated with elevated risk for tumors of the

breast, thyroid, kidney and uterus.

### Sequence similarities

Belongs to the succinate dehydrogenase/fumarate reductase iron-sulfur protein family.

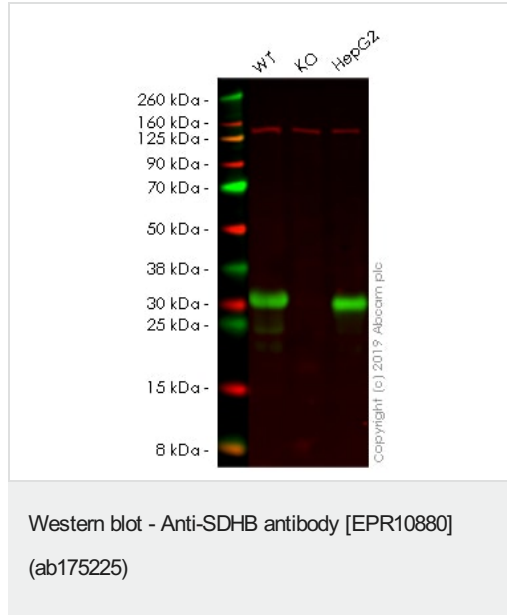
Contains 1 2Fe-2S ferredoxin-type domain.

Contains 1 4Fe-4S ferredoxin-type domain.

### Cellular localization

Mitochondrion inner membrane.

## Images



**All lanes :** Anti-SDHB antibody [EPR10880] (ab175225) at 1/50000 dilution

**Lane 1 :** Wild-type HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate

**Lane 2 :** SDHB knockout HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate

**Lane 3 :** Hep G2 (Human liver hepatocellular carcinoma cell line) whole cell lysate

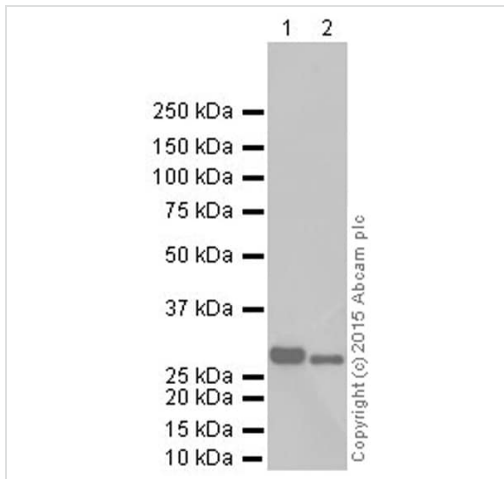
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 32 kDa

**Lanes 1 - 3:** Merged signal (red and green). Green - ab175225 observed at 32 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab175225 was shown to recognize SDHB in wild-type HEK 293 cells as signal was lost at the expected MW in SDHB knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SDHB knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab175225 and **ab130007** (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/50000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-SDHB antibody [EPR10880] (ab175225)

**All lanes :** Anti-SDHB antibody [EPR10880] (ab175225) at 1/100000 dilution (purified)

**Lane 1 :** HepG2 whole cell lysate

**Lane 2 :** Jurkat whole cell lysate

Lysates/proteins at 10 µg per lane.

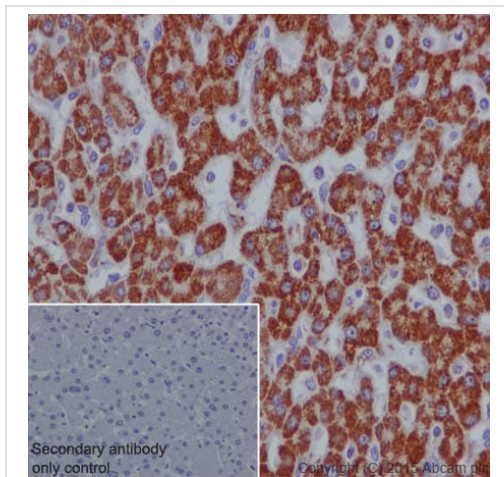
**Secondary**

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 32 kDa

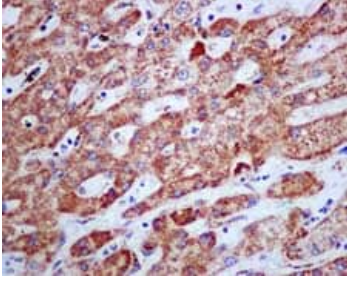
**Observed band size:** 32 kDa

Blocking and dilution buffer: 5% NFDm/TBST



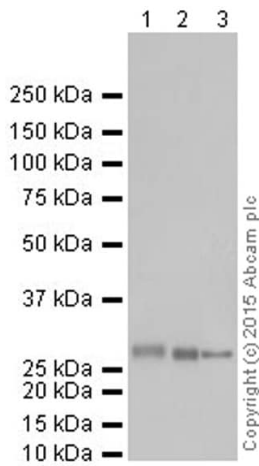
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue labelling SDHB with purified ab175225 at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue labeling SDHB with unpurified ab175225 at a dilution of 1/100.



Western blot - Anti-SDHB antibody [EPR10880] (ab175225)

**All lanes** : Anti-SDHB antibody [EPR10880] (ab175225) at 1/100000 dilution (purified)

**Lane 1** : Mouse brain tissue lysate

**Lane 2** : Rat brain tissue lysate

**Lane 3** : Mouse spleen tissue lysate

Lysates/proteins at 10 µg per lane.

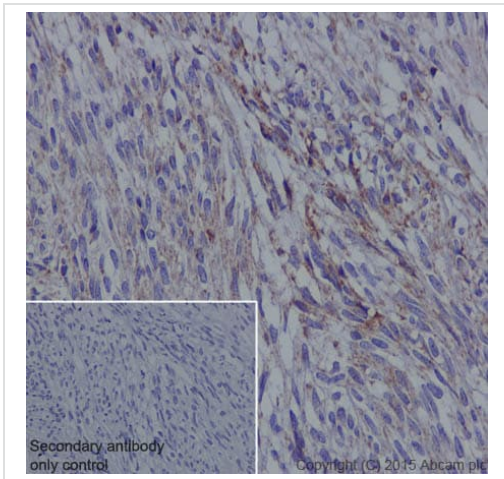
#### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

**Predicted band size:** 32 kDa

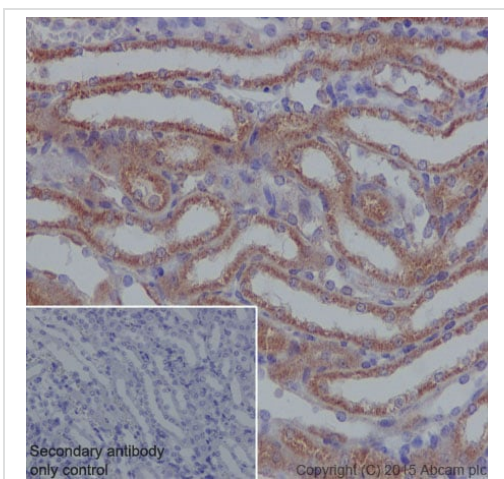
**Observed band size:** 32 kDa

Blocking and dilution buffer: 5% NFDM/TBST



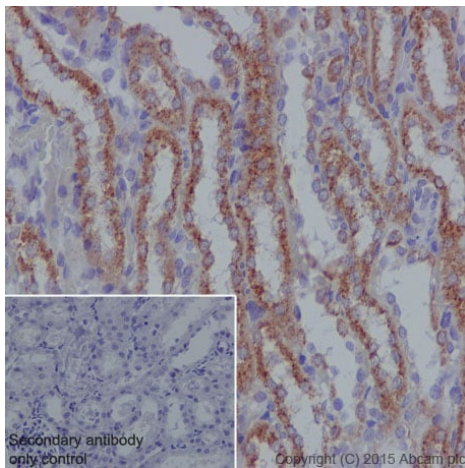
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human mesenchymoma tissue labelling SDHB with purified ab175225 at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



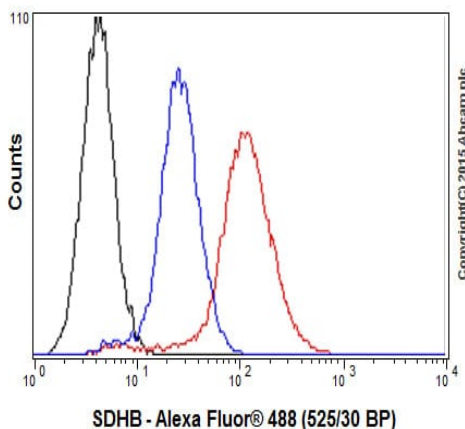
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue labelling SDHB with purified ab175225 at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



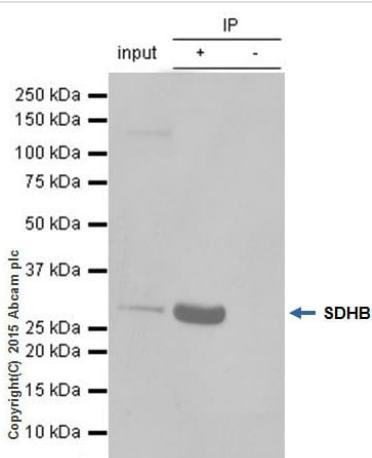
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue labelling SDHB with purified ab175225 at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Flow Cytometry (Intracellular) - Anti-SDHB antibody [EPR10880] (ab175225)

Intracellular Flow Cytometry analysis of A431 cells labelling SDHB with purified ab175225 at a dilution of 1/200 (red). Cells were fixed with 4% paraformaldehyde. An Alexa Fluor<sup>®</sup>488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunoprecipitation - Anti-SDHB antibody [EPR10880] (ab175225)

ab175225 (purified) at a dilution of 1/60 immunoprecipitating SDHB in Jurkat whole cell lysate.

Lane 1 (input): Jurkat whole cell lysate (10µg)

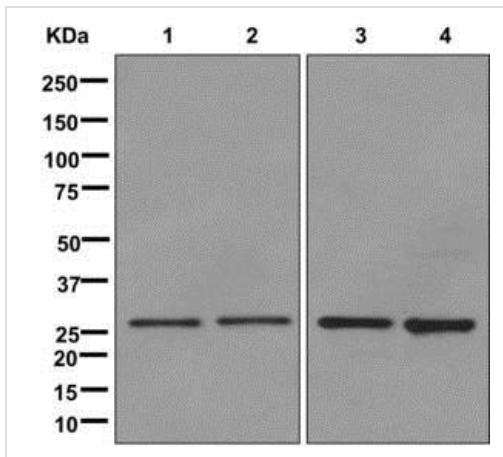
Lane 2 (+): ab175225 + Jurkat whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab175225 in Jurkat whole cell lysate.

For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10,000 dilution.

Blocking buffer and concentration: 5% NFDm/TBST.

Diluting buffer and concentration: 5% NFDm /TBST.



Western blot - Anti-SDHB antibody [EPR10880] (ab175225)

**All lanes :** Anti-SDHB antibody [EPR10880] (ab175225) at 1/50000 dilution (unpurified)

**Lane 1 :** HepG2 cell lysate

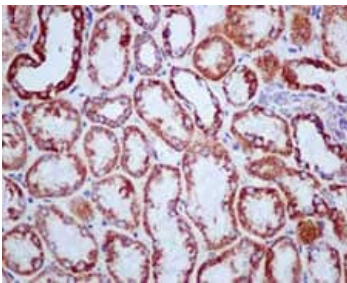
**Lane 2 :** A431 cell lysate

**Lane 3 :** Jurkat cell lysate

**Lane 4 :** Fetal heart tissue lysate

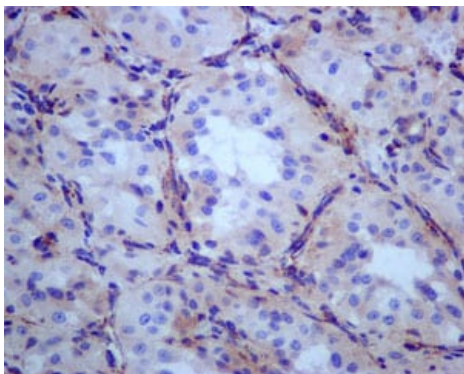
Lysates/proteins at 10 µg per lane.

**Predicted band size:** 32 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

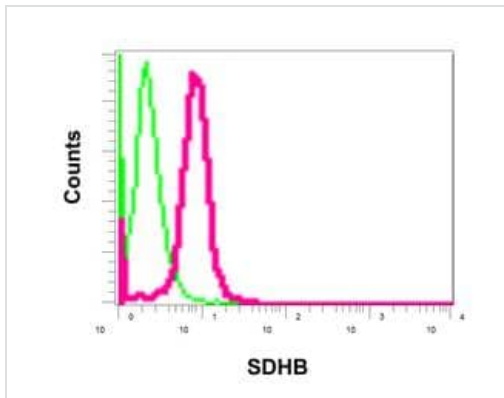
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue labeling SDHB with unpurified ab175225 at a dilution of 1/100.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] (ab175225)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human carotid paraganglioma tissue labeling SDHB with unpurified ab175225 at a dilution of 1/100.







Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling SDHB with unpurified ab175225 at a dilution of 1/10 (red) compared to a rabbit IgG negative control (green).

Flow Cytometry (Intracellular) - Anti-SDHB antibody [EPR10880] (ab175225)

Why choose a recombinant antibody?

 <b>Research with confidence</b> Consistent and reproducible results	 <b>Long-term and scalable supply</b> Recombinant technology
 <b>Success from the first experiment</b> Confirmed specificity	 <b>Ethical standards compliant</b> Animal-free production

Anti-SDHB antibody [EPR10880] (ab175225)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors